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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,783	09/24/2007	Koji Furutani	36856.1444	6659

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EXAMINER
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JACKSON, BLANE J

ART UNIT	PAPER NUMBER
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2618

NOTIFICATION DATE	DELIVERY MODE
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03/25/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JKEATING@KBIPLAW.COM  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/595,783	<b>Applicant(s)</b> FURUTANI ET AL.	
	<b>Examiner</b> BLANE J. JACKSON	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The Information Disclosure Statements filed 11 May 2006, 28 February 2008, 18 April 2008, 24 February 2009, 07 July 2009 and 09 February 2010 are made of record.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12, 13 and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Satoh et al. US 6,995,630.

As to claim 12, Satoh teaches a high-frequency module for transmitting and receiving transmission-reception signals of communication systems of at least three kinds from an antenna, the signals to be inputted and outputted from particular input-

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output portions, respectively (Abstract, figures 2B and 3B, a high frequency compound antenna switch module to control and separate the transmit and receive frequencies of three or four wireless communication bands), the high-frequency module comprising:

an FET switch including an antenna input-output portion to be connected to the antenna and at least three signal input-output portions whose connection to the antenna input-output portion is switched in accordance with control signals to be inputted, the FET being constituted such that the transmission signals of communication systems of three kinds are inputted from different signal input-output portions and such that reception signals of at least two communication systems are outputted from the same signal input-output portion (figure 3B, column 7, line 36 to column 9, line 30, line 11, a four band high frequency compound voltage controlled, five port antenna switch configured with diplexer (40) coupled to a input/ output port to separate the reception of the second communication system or band and the reception/ transmission of a third band), and

a diplexer connected to the signal input-output portion of the FET switch, from which reception signals of at least two communication systems are outputted, the diplexer being arranged to separate the reception signals of the at least two communication systems (figure 3B, column 9, lines 4-30, diplexer (40) coupled to an input/ output port of the SP5T switch (28) to frequency separate the reception of the third communication system or band and the reception/ transmission of a fourth band).

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As to claim 13 with respect to claim 12, Satoh teaches wherein the high-frequency module is a high-frequency module arranged to transmit and receive transmission-reception signals of first, second, third, and fourth communication systems from the antenna, and the FET switch includes first, second, third, and fourth signal input-output portions and is constituted such that transmission signals of the first communication system and the second communication system are inputted to the first signal input-output portion, such that transmission signals of the third communication system and the fourth communication system are inputted to the second signal input-output portion, such that reception signals of the first communication system and the fourth communication system are outputted from the third signal input-output portion, and such that reception signals of the second communication system and the third communication system are outputted from the fourth signal input-output portion.

As to claim 19 with respect to claim 12, Satoh teaches the FET switch is an FET switch including GaAs (column 15, lines 4-7, FET switches made by GaAs process).

As to claim 20, Satoh teaches the high-frequency module includes a laminate having dielectric layers laminated therein, and each circuit element constituting the diplexer is made up of an electrode pattern disposed on the surface of the dielectric layer (figures 8, 9 and 10, column 15, line 34 to column 18, line 6, switches, filters and diplexer may be configured as a monolithic IC).

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As to claim 21 with respect to claim 20, Satoh teaches on an uppermost surface of the laminate, a plurality of lands for mounting an antenna input- output portion and each signal input-output portion of the FET switch are disposed and a grounding electrode is disposed substantially in the center where the plurality of lands are disposed (figures 10a, 10b and 10c, column 16, lines 1-45).

As to claim 22 with respect to claim 20, Satoh teaches wherein, on an lowermost surface of the laminate, a plurality of electrodes for mounting the laminate on a mounting substrate is disposed, and an electrode of the input-output portion for inputting a transmission signal and an electrode of the antenna input-output portion in the plurality of electrodes are disposed along different sides of the laminate (figures 8 and 9, column 15, lines 34-67, ports or electrode patterns are arranged around the sides and corners and filter/ switch circuits may be formed using an electrode pattern within a multilayer structure of dielectric material).

As to claim 23 with respect to claim 20, Satoh teaches on an uppermost surface of the laminate, a plurality of lands for mounting the antenna input- output portion and each of the at least there signal input-output portions of the FET switch are disposed and a grounding electrode is provided inside the laminate at a location corresponding to where the plurality of lands are disposed (figures 8, 9 and 10, column 15, lines 34-67, ports or electrode patterns are arranged around the sides and corners and filter/ switch

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circuits may be formed using an electrode pattern within a multilayer structure of dielectric material).

### ***Allowable Subject Matter***

Claims 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With respect to claims 14-18, the prior art made of record does not teach the various configurations for a high frequency module for transmitting and receiving transmission reception signals of communications systems of at least three kinds from an antenna.

### ***Conclusion***

Reference the attached Cited References for the prior art made of record and not relied upon but considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BLANE J. JACKSON whose telephone number is (571)272-7890. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blane J Jackson/  
Examiner, Art Unit 2618